

LETTERS TO THE EDITOR

PENILE CANCER IN ELDERLY CIRCUMCISED MAN

To the Editor:

In the April issue of the *Journal*, Cold et al¹ reported a case of carcinoma in situ (CIS) in an elderly circumcised man and used this case to support their argument that circumcision does not prevent penile cancer. This argument is fallacious, however.

CIS is a heterogeneous condition that has three possible grades of cytologic atypia,^{2,4} one of which (Bowenoid papulosis) has not been shown to develop into invasive carcinoma.^{2,4} Therefore, CIS cannot be considered equivalent to invasive squamous cell penile cancer, a well-defined disease that has a 5-year mortality of about 20%. Further, unlike lethal invasive penile cancer, which is rare among circumcised men,⁵ CIS in circumcised men has been reported often^{6,9}; the case reported by Cold et al is therefore not unusual. Equating CIS with invasive penile cancer is equivalent to equating a nevus with malignant melanoma.

In addition, Cold et al claimed incorrectly that the medical literature has not confirmed that circumcision protects against penile cancer. Of 592 cases of invasive penile cancer seen at five medical centers in five states, none represented men who had been circumcised in infancy.⁵ The cases included 120 men from New York, 139 from Illinois, 100 from Roswell Park, 156 from Michigan, and 77 from Ohio. These data provide overwhelming evidence that invasive penile cancer is almost completely prevented by newborn circumcision.

The claim of Cold et al that post-

neonatal circumcision increases the risk of penile cancer is an example of faulty reasoning. Men circumcised late in life are a high-risk group because many procedures in this group are prompted by abnormality or disease, which in itself makes penile cancer more likely to develop. The reasons for late circumcision range from phimosis to malignant foreskin lesions, so the greater likelihood that penile cancer will develop in these high-risk men is hardly surprising; indeed, some men already have penile cancer when they are circumcised.

The preventive effect of circumcision is maximized when the procedure is done in the newborn period. Among Moslems, for whom circumcision is done at various ages (depending on sect), maximum protection is known to exist among those circumcised at the youngest age, minimum protection among those circumcised late in life. In many instances where circumcision has been delayed, the factors responsible for malignant changes have already begun.

One final point, Cold et al compared the incidence of invasive penile cancer in the United States with that in Denmark. This is invalid because Danish men tend not to be circumcised, whereas three quarters of US men are circumcised. The rate of invasive penile cancer among *uncircumcised* US men is 2 to 3 times as high as in Danish men. Thus, the United States has a low incidence of invasive penile cancer *because* most men in this country have been circumcised, and combining circumcised with uncircum-

cised men is the cause for this overall low incidence.

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The preceding letter was referred to Drs Cold, Storms, and Van Howe, who respond as follows:

Dr Schoen presents a distillate of medical folklore supporting the circumcision premise: the belief that circumcision can prevent cancer decades later. Although removing half the penile epithelium¹ eliminates epithelium that could develop malignancy, all mucosal surfaces are susceptible to carcinogens. However, expanding the circumcision premise and routinely removing other healthy

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mucosa to reduce cancer risk is not an acceptable method of cancer prevention.

The prevalence of penile carcinoma is so low that a prospective study with adequate numbers would be impossible.² The best way to estimate its incidence is extrapolating from case-controlled studies. To perpetuate the circumcision premise, Schoen³ and Wiswell⁴ purposefully underestimate the incidence of penile cancer in circumcised men by mixing national prevalence data with numbers of cases reported in the medical literature. This is an unacceptable statistical practice.

Schoen's understanding of premalignant and malignant lesions of the penis is muddled. Our case report was of carcinoma in situ (CIS) and not Bowenoid papulosis, a lesion reported to progress to CIS.⁵ CIS is not graded into three types, as Schoen incorrectly asserts. Furthermore, equating CIS with a benign nevus is dangerous. CIS requires complete excision, whereas a benign nevus requires no treatment.

Schoen, a tireless advocate of neonatal circumcision,^{6,9} is depending on uncontrolled case series from 23 to 62 years ago as proof of circumcision's efficacy,¹⁰⁻¹⁴ when a recent case-controlled study documented that 20% of penile cancer cases occurred in men circumcised as infants.¹⁵ Nearly all of the cases from the five studies alluded to by Schoen¹⁰⁻¹⁴ were born in the 19th century, when neonatal circumcision was an unusual practice and hygienic standards were lower.

Schoen takes exception to the well-established cancer risk of being circumcised after the neonatal period. It is inappropriate to speculate that these men had malignancies at the time of circumcision when nothing in these studies suggested this.

We could not find documentation of the assertion that penile cancer incidence among Moslems differed depending on circumcision age. This also contradicts Schoen's previous

inference that all Moslems were protected against penile cancer.⁹ When Schoen speculates that the factors for malignant change begin in infancy, which factors is he referring to? Tobacco use, multiple sexual partners, and human papillomavirus are not prevalent in prepubescent males.

Dismissing the low rate of penile cancer in Denmark defies reason. If neonatal circumcision prevents penile cancer, and 75% of American males were circumcised as neonates, the US rate of penile cancer should be one-quarter Denmark's rate, where 1.5% are circumcised.¹⁶ Denmark, like most non-circumcising first world nations, has a lower penile cancer rate than that of the US.¹⁷ The speculation that uncircumcised US men have an incidence of invasive penile cancer that is 2 to 3 times as high as men in Denmark has no basis in fact.

The only way to eliminate penile cancer is to remove the entire penis, not just the prepuce. Therefore, we must agree with the American Cancer Society,⁸ the Canadian Paediatric Society,¹⁸ and the Australasian Association of Paediatric Surgeons¹⁹ that neonatal circumcision is not a rational method of preventing penile cancer.

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CORRECTION

In the software review in the September issue of the *Journal, USP DI Plus, Drug Information for the Health Care Professional*, (pages 264-66), the illustrations in Figures 2 and 3 were reversed; the figure legends are correct. The *Journal* regrets the error.

*Correspondence from Hugh Shingleton, MD, National Vice President Detection & Treatment and Clark W. Heath, Jr, MD, Vice President Epidemiology & Surveillance Research, the American Cancer Society, to Peter Rappo, MD, American Academy of Pediatrics, February 16, 1996.